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Teaching assistants and pupils' academic and social engagement in mainstream schools: insights from systematic literature reviews

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Abstract

The last 20 years have seen a huge expansion in the additional adults[1] working in classrooms in the UK, USA, and other countries. This paper presents the findings of a series of systematic literature reviews about teaching assistants. The first two reviews focused on stakeholder perceptions of teaching assistant contributions to academic and social engagement. Stakeholders were pupils, teachers, TAs, headteachers and parents. Perceptions focused on four principal contributions that teaching assistants contribute to: pupils' academic and socio-academic engagement; inclusion; maintenance of stakeholder relations; and support for the teacher. The third review explored training. Against a background of patchy training provision both in the UK and the USA, strong claims are made for the benefits to TAs of training provided, particularly in building confidence and skills. The conclusions include implications for further training and the need for further research to gain an in-depth understanding as to precisely the manner in which TAs engage with children.

The systematic literature reviews that form the basis for this presentation were funded by the Training and Development Agency for Schools (TDA) managed by the EPPI-Centre review team at the Institute of Education, University of London (www.eppi.ioe.ac.uk). It was conducted at the University of Leicester, in collaboration with Bishop Grosseteste University College, Lincoln and Newman College, Birmingham by Wasyl Cajkler, Dr. Geoff Tennant, Dr Yonca Tiknaz, Rachel Tansey, Dr Rosie Sage, University of Leicester, Claire Taylor, Bishop Grosseteste University College and Professor Stan Tucker, Newman College.

[1] Additional adults in the classroom are known by many different titles, only to a limited extent reflecting different roles that they take. In general, the term 'teaching assistant' will be used in this paper except when directly quoting from a source using a different title.

Introduction: deployment and training of TAs

This paper reports the outcomes of a three-year research project to conduct literature reviews into the work of Teaching Assistants (TAs) in mainstream schools. The reviews were conducted against a background of an increasingly large number of support staff working in mainstream classrooms. In January 2007 there were 162,900 full time equivalent (FTE) teaching assistants in schools in England, with 431,700 FTE teachers, giving a ratio of 1 TA for every 2.9 teachers. The situation is similar in the USA (National Center for Education Statistics 2003: 97) where there are now over 550,000 teaching assistants in state schools**.**

Recent policy initiatives have led to growing numbers of TAs in schools and this has led to discussion about training. The Training and Development Agency for Schools (TDA) stated in their plans for support staff training 2005-06 that 'Our aim is that all support staff have access to high quality training and development' (TDA 2005: 4). Mandatory requirements are not in place in the UK though expectations about training are changing. Many Local Authorities have introduced requirements and levels for teaching assistants, with pay sometimes related to level of training. However, there are concerns to address about the take up of training (Russell et al. 2005) which may be due to its voluntary and locally organised nature. Bach, Kessler & Heron's (2006: 13) research in ten primary schools found that few of the schools had 'formal induction programmes and training. The emphasis was on individual TAs highlighting their training requirements informally and lobbying the head to support them, rather than the school identifying the training needs of their TAs in a systematic manner.'

In the US, the vast majority of paraprofessionals receive no pre-service training nor any formal in-service training when they move into a different school

> 'During focus group discussions, paraprofessionals reported feeling "thrown into" their jobs highly unprepared, and, although they do learn many skills on the job, they still stressed the need for pre-service training, on-going in-service training, and other professional development activities' ((Moshoyannis, Pickett & Granick, 1999; 5).

In the 1990s, training programmes for TAs seemed to occur as some kind of afterthought (Pickett 1996). French (2001) reviewed on the job training experiences of 321 teachers responsible for paraprofessionals. Teachers on the job often addressed teaching techniques and behaviour management strategies with their support staff in attempts to improve practice, and the most frequently used approaches to training the support staff were 'telling' or 'providing feedback' (ibid: 48). Learning from the teacher has been reported in UK studies, for example Hughes & Westgate (1997). Training has been patchy (Russell et al. 2005) although teaching assistants are now offered more training than other support staff, for example administrative and technical staff (UNISON 2004).

It was in this context that we sought to synthesise existing research about TA contributions to pupils' engagement and their training for the jobs they do.

What is a systematic literature review?

A systematic review is a piece of research following standard methods, in this case prescribed by the EPPI-centre at the Institute of Education, University of London (see www.eppi.ioe.ac.uk). A review explores the findings of primary research to answer a specific question, taking steps to reduce hidden bias and 'error' at all stages. It is carried out by a review team and EPPI-Centre staff provide training, support and quality assurance to the review team.

In brief, the steps are:

- identify a principal review question;
- formulate search terms to interrogate electronic databases, and journals;
- formulate 'exclusion criteria' to exclude papers which do not address the review question;
- compile a list of papers which address the review question, to create the 'map';
- create a database of key information about the studies in the map, called 'keywording';
- refine the review question and formulate revised exclusion criteria to identify a small number of papers for in-depth review (see Appendix 1);
- complete a detailed 'in-depth' analysis of each paper, a process called 'in-depth data extraction';
- write a systematic report on the literature based on the quantitative and qualitative research processes listed above.

The focus of the three reviews

Technical information on the reviews can be found in Appendix 2, but in brief, the first review, *"What is the impact (both measured and perceived) of training on primary and secondary TAs and their ability to support pupils' learning and engagement?*" (Cajkler et al. 2006) focused on stakeholder perceptions about the contributions of primary school TAs (1988-2003). This led to a map of 145 studies. A reduction to 17 studies was achieved by focusing on studies from the UK/EU, looking at parents', teachers', pupils' and TAs' perceptions of TA contributions to academic and social engagement in mainstream primary classrooms.

The second review, *"What are the perceptions and experience of the principal educational stakeholders (pupils, parents, teachers and teaching assistants) of what TAs do in relation to pupils' academic and social engagement in secondary schools?"* (Cajkler et al. 2007a) updated the first, leading to a systematic map of 168 studies that investigated the contribution and roles of TAs (1988-2005). An in-depth analysis of 17 studies was conducted about secondary school TAs in the UK and EU.

For the third review, *"What is the impact (both measured and perceived) of training on primary and secondary TAs and their ability to support pupils' learning and engagement?"* (Cajkler et al. 2007b), we mapped 81 studies that reported on the training of TAs in three countries (USA, UK and Australia). 16 studies were analysed in depth, to identify measured and perceived impacts of award-bearing training programmes on TAs.

Summary of reviews 1 and 2: TA contributions

The first two reviews (Cajkler et al. 2006; Cajkler et al. 2007a) confirmed that the TA's role is multifaceted, including provision of direct instructional support to pupils and acting as an inclusion aide, with four contributions particularly strong:

1. Instruction: Direct academic and socio-academic contributions to pupils: TAs supported pupils directly e.g. mediating teacher inputs and peer interactions.
2. Inclusion: TAs supported the inclusion of pupils by maximising opportunities for pupils to participate constructively in the social and academic experience of schooling.
3. Glue function: TAs acted as a link between different stakeholders, gluing the parts together, acting as a go-between, communicator or mediator.
4. Teacher support: TAs performed routine tasks that enabled teachers to focus on securing academic engagement.

In reviews 1 and 2, TA and teacher voices were well represented, in about 70% of the studies. Pupils' and parents' opinions about TA work were heard far less often.

Stakeholder perceptions in reviews 1 and 2 (N=168)

Stakeholder perceptions	Map for reviews 1 and 2
TAs	122 (72%)
Teachers	117 (69%)
Senior management	57 (34%)
Pupils	31 (18%)
Parents	29 (17%)

Percentages do not add up to 100% because codes are not mutually exclusive

TAs saw themselves as key figures in the education of children. Some were aware they could interfere with the integration of pupils both socially and academically but in general TAs claimed to be promoting independence and to be supporting the academic development of pupils. **Teachers** welcomed the support and flexibility that the presence of an additional adult gave them, to bring about inclusive practices. **Headteachers** valued the contributions of TAs in contributing to inclusion but also recognised that TAs could create a culture of dependence and some took steps to brief TAs explicitly on their duties (e.g. Abbott and Moran, 2002), the boundaries for which were also discussed in McGarvey et al. (1996).

Pupil perceptions centred around the teaching assistant being someone to listen to them and someone who helped the teacher to cope. However, some pupils could see interventions by TAs as intrusive and unhelpful (Jarvis, 2003; Bowers, 1997). **Parents** thought TAs were often vital to the education of their children and even to their inclusion (Ebersold 2003). According to parents, social work trained support workers in Vulliamy & Webb (2003) were significant in securing attendance in lessons and in maintaining relations between pupils and teachers (the glueing function), even accompanying disaffected students to lessons.

Summary of review 3: TA training

Opportunities exist in the UK, USA and elsewhere but these have grown in relatively haphazard ways despite initiatives such as the Specialist Teaching Assistant (STA) programme in the UK and *No Child Left Behind* (NCLB) criteria in the USA. Where available, training programmes (such as the STA programme in the UK) were believed to be effective in raising awareness, in raising TAs' confidence and subject knowledge, as well as improving their instructional skills. Training led to improvements in confidence and usually to greater self-esteem and sometimes more job satisfaction. Exactly how such impacts are achieved is not clear. In addition, some of the studies reviewed reported a sense of frustration as TAs became more critically aware and ready to challenge teacher knowledge and practice.

UK studies reported on very much the same issues as those in the USA, but in the USA there was more explicit focus on inclusion, especially supporting learners without hovering over them and thus impeding their integration. There are no longitudinal studies of impact, although one study (Hutchings 1997) did ask for feedback one year after training, and others, notably Swann & Loxley (1998) sought to identify how training had changed TA involvement in teaching and learning. The latter were not optimistic about the ability of training to transform the engagement of TAs in the teaching and learning process, as this depended on a range of other factors including teacher readiness. It is worth noting that this paper was the most impressive in terms of quality. Others were flawed in a number of ways e.g. lacking a clear description of the research methodology.

Training programmes focused on instructional skills or inclusion, but few focused on the communication skills needed to work with parents (a lack noted by Lewis 2003 in the USA). In addition, little attention was given to non-verbal communication, including gesture, gaze or posture. Finally, we learned little from the studies about impacts on pupils.

Findings on behaviour management

The papers within the three systematic reviews were re-analysed to assess the extent to which the role of the teaching assistant was bound up with behaviour management. The re-analysis of the papers pointed towards behaviour management being perceived relatively infrequently as an explicit part of the role of the TA.

Review	Total studies in map	Studies in map about behaviour	Total studies in in-depth review	Studies in in-depth review about behaviour
1: perceptions of role in primary sector	145	12	17	2
2: perceptions of role in secondary	168	8	19	1

sector				
3: perceptions of impact of training	81	18	16	4

On the face of it, this relative lack of mention of behaviour management is surprising. One explanation, inferred from papers that touched on behaviour, is that many of the contributions made by TAs feed indirectly into behaviour management. If a TA works on a task with a child who otherwise would not have had individual help, then there is perhaps less scope for the child to be causing behaviour problems. With a better understanding of the task and a higher motivation to be engaging with it, the child has less reason to be misbehaving thereafter.

Interestingly, the one group of stakeholders most likely to mention behaviour management as part of the role of the TA appeared to be children. Bowers (1997) reported that when children were asked why TAs were in their classrooms, behaviour management was the second biggest issue, after the need for general help for the teacher who might otherwise "get in a muddle" (quotation from pupil, p. 223). Very little detail comes through the paper as to what TAs might actually do to manage behaviour, although the following quotation from a 13 year old boy may give some clues: "I think there should be just one teacher in a class. Where there's two that is two of them to nag you instead of one" (p. 230).

Many studies work at a very high level of generality. Even when behaviour management is discussed in studies, it is frequently still not clear precisely what TAs actually do in the name of behaviour management. The implication from studies looking at training is that effectively 'knowledge leads to greater power'. This conclusion would be consistent with the vague comment reported by Terrell et al. (2004: 12): "Research work has improved pupil behaviour." Hutchings (1997) also implies, in general terms, that TAs knowing more about behaviour management had positive impacts on children. Swann and Loxley (1998) reported that there was a small increase in TA participation in behaviour management following the course (30% reporting an increase), but since the report was based only on questionnaire evidence, there is no means of making an independent judgement on this point about any activities that took place. Observations of TAs managing behaviour are needed.

What comes across strongly from a whole number of studies is the beneficial impact of keeping interventions low-key and / or outside the classroom itself. Two such are by Vulliamy and Webb (2003) and Roaf (2003). The former paper was concerned with support workers operating with schools but usually outside the classroom. It is particularly interesting to note that the benefits identified by pupils (p. 279) included preventing confrontational situations in lessons from escalating; prior knowledge that there would be an opportunity to speak to the support worker shortly made a clear positive difference to the behaviour of the child in the classroom, with the support often happening outside the room. Roaf (2003), reporting perceptions of TAs working in mainstream secondary contexts, cites an occasion in which a child working away from the classroom for a while gave both the teacher and the child space so that the child could then re-enter the classroom.

As to low-key interventions, Gittman and Berger (1997) asked TAs to write a brief essay about the beneficial effects of a training course they had attended. A number of effective practices emerged including taking a low-key role, ignoring or downplaying poor behaviour, setting clear rules at the beginning, allowing children to settle their own disputes. This complements other studies, e.g. Giangreco et al. (1997) which expresses concern about the extent to which TAs 'hovered' over children, decreasing children's autonomy rather than increasing it, and also limiting their access to the class teacher. Similarly, Skär and Tamm (2001) spoke to young adults with limited mobility about their experiences of assistants whilst children. Many of them spoke about the need for the assistant to know when to stand back to facilitate their own peer group interventions.

Discussion

'Helping or hovering': TAs in the frontline

The underlying assumption in deploying TAs is that additional adults in the classroom is a 'good thing' – and, indeed, evidence can be found of excellent work being done. This includes Blatchford et al. (2004), a long-term study of TAs in English primary schools, which suggests that TAs reinforce learning and engage in processes that involve 'repetition, practice, reiteration and consolidation' (p. 37), with more active interaction between pupils and teachers when a TA was present (p. 51). What also emerges from our reviews is that the principal contributions of classroom-based TAs are in support for pupils, direct interactions, rather than in support for teachers. But there are a number of reasons for being cautious in automatically assuming that this is effective.

Tennant (2001) argued that it is the classroom assistant, usually less well qualified than the teacher and almost certainly less well-paid, who does the most difficult teaching in mediating new concepts to children who have learning difficulties and have not understood the teacher's input. Thomas (1992) noted that in non-educational workplaces a great deal of time and effort goes into building and maintaining effective teams, whereas at the time when classroom support was becoming much more of a reality, it was deployed with little particular thought as to how the team might function.

Other studies in Europe and the USA have referred to the danger of cocooning pupils in over-protective or exclusive webs (Broer et al. 2005; Jarvis, 2003; Skär and Tamm, 2001). One paper, aptly titled, 'Helping or hovering?' (Giangreco et al. 1997) looked at work done by classroom assistants with physically disabled youngsters in mainstream classrooms, including accounts of boys being taken to girls' toilets because the teaching assistant was female. The paper concluded that often support given separated children from the rest of the class and gave them very little autonomy. Jarvis (2003), reporting perceptions of children with hearing loss, found a number complaining about being over-supported: "Sometimes when I stop writing, realising that I have made a mistake, she would leap to the rescue, asking if I wanted any help. Often I said no but she would push me aside and take my work to check. I wish I could conjure something that would freeze her at least for a few minutes" (p. 167). Other studies outside our review, for example Broer et al. (2005), from interviews of young

adults with intellectual disabilities, argued for paraprofessionals to consider the social validity of the support they are providing.

Given that promoting inclusion and fostering independence are identified as key components of the TA role, there is a clear implication for future research in establishing how TAs might achieve this given the possibility of the opposite actually occurring. This has implications for the training of TAs as to how to work with children in a manner which genuinely accomplishes interaction and integration.

Conclusion

We believe that further research is required on:

- the quality of the educational experience of children whose main contact is with TAs;
- how TAs decide how to support and how to avoid hovering;
- when TAs provide support, how this is constructed;
- TA-pupil interaction and discourse patterns;
- views of pupils about TAs;
- the relative merits, within existing budgets, of supporting children through the deployment of TAs rather than employing a smaller number of fully qualified teachers acting in a support role, or reducing class sizes.

As regards the training of TAs, well-designed studies are few in number so more evidence is required on how training prepares TAs to:

- support learning and engagement,
- take up their communicational roles in managing relationships,
- act as a bridge between teachers and pupils,
- support recent legislation such as *No Child Left Behind* (USA)/*Every Child Matters* (UK).

There is every indication, in the UK, USA and many other countries, that the number of TAs is set to increase further, with a corresponding expansion in their responsibilities. This examination of the current literature suggests that we need to review both contributions and training, to arrive at a clearer understanding of how TAs improve learning and behaviour, how they converse with pupils and how they support teachers. Given the increase in resources devoted both to employing and training TAs, there is the need to ensure that this money is spent most effectively in supporting pupils in need of help for whatever reason.

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Appendix 1: papers included in the in-depth reviews.

260 papers found their way in the three maps. A full list can be supplied on request to the authors. Here we present the indepth studies for ***Reviews 1 and 2 (Perceptions about TA contributions to academic and social engagement)and Review 3 (training):***

REVIEW 1 (primary schools) (N = 17)

BASKIND, S., & MONKMAN, H. (1998). Are assistants effectively supporting hearing-impaired children in mainstream schools? *Deafness and Education*, 22(1), pp. 15-22.

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Appendix 2: technical information on the literature reviews

Review 1 (Cajkler et al. 2006)

Original review question:	What are the perceptions and experience of the principal educational stakeholders (pupils, parents, teachers and pupil support staff) of what support staff do in relation to pupils' academic and social engagement?
Publication dates covered:	1988-2003
Total papers screened:	9 966
Total papers acquired:	440 (full screening)
Total papers in map:	145 studies (162 papers)
Refined focus:	primary schools in the UK/ / EU
Papers in in-depth review:	17 studies (27 papers): see Appendix 1

Review 2 (Cajkler et al. 2007a)

Original review question:	What are the perceptions and experience of the principal educational stakeholders (pupils, parents, teachers and teaching assistants) of what TAs do in relation to pupils' academic and social engagement in secondary schools?
Publication dates covered:	1988-2005
Total papers screened:	10 545
Total papers acquired:	511 (full screening)
Total papers in map:	168 studies (186 reporting)
Refined focus:	secondary schools in the UK / EU
Papers in in-depth review:	17 (see Appendix 1)

Review 3 (Cajkler et al. 2007b)

Original review question:	What is the impact (both measured and perceived) of training on primary and secondary TAs and their ability to support pupils' learning and engagement?
Publication dates covered:	1988-2006
Total papers screened:	9 604
Total papers acquired:	581 (full screening)
Total papers in map:	81 studies (82 papers)
Refined focus:	award bearing training programmes (UK/USA/AUS)
Papers in in-depth review:	16 (see Appendix 1)